# Kansas' Cooperative Agriculture Pest Survey

Cooperative Agreement: 09-8453-1223-CA Period Covering: 7/1/09-6/30/10

# Semi-Annual CAPS Infrastructure and Fiscal Report July 1, 2009 through December 31, 2009

This report summarizes the activities conducted during the agreement's semi-annual work period, July 1, 2009 through December 31, 2009.

#### **Infrastructure**

#### **Cooperative Agreements For January 1, 2009-December 30, 2009:**

- Small Grain & Soybean Commodity Survey Silver Y Moth, Egyptian Cotton Leafworm, Old World Bollworm, Yellow Witchweed and Soybean Aphid (in soybean fields), Cereal Leaf Beetle (in wheat fields) and Maritime Gardensnail in wheat and soybeans in Central Kansas. Also beneficials- Insidious Flower Bug, Minute Pirate Bug, Damsel Bug, Lacewings and Lady Beetles. Counties: Butler, Clay, Cloud, Cowley, Dickinson, Ellsworth, Harper, Harvey, Jewell, Kingman, Lincoln, Marion, McPherson, Mitchell, Ottawa, Reno, Republic, Rice, Saline, Sedgwick, Sumner and Washington. Survey from May-September.
- Red Imported Fire Ant Survey El Dorado area where trees were planted from Tennessee. Survey is planned from May-August.
- Emerald Ash Borer 100 traps mostly at campgrounds and event areas throughout the state. Survey is planned from May-September. USDA will be setting 100 traps also.
- Biocontrol-
  - Canada Thistle control using Ceutorhynchus litura.
  - Spotted Knapweed control using the lesser knapweed flower weevil (*Larinus Minutus*) and the knapweed root weevil (*Cyphocleonus achates*).

Infrastructure-this project will still be a on a fiscal year basis, July 1, 2009-June 30, 2010.

The Kansas Department of Agriculture, Plant Protection and Weed Control program had an informational booth set up at the Shawnee County fair on July 23, 2009-July 26, 2009. Bill Scott and Laurinda Ramonda manned the booth during various hours.

#### Literature handed out:

- Gypsy Moth Pest Alert-12
- Invasive Weeds Watch List-38
- Brazilian Elodea & Hydrilla-41
- Don't Move Firewood bumper magnets-48 EAB Green Menace brochure-18
- Plum Pox Virus-11
- Invasive Pest Watch List-21
- Have You Seen These Plants? Posters-15
- Multicolored Asian Lady Beetle-47
- Asian Longhorn Beetle-14
- EAB Pest Alert-12

- Africanized Bees-20
- Fire Ants-16
- EAB identification cards-1/2 pack
- Sudden Oak Death Pest Alert-14
- Departmental Duties-17
- Japanese Beetle-19
- Sirex Woodwasp-14
- EAB Threat to KS Ash Trees-18
- EAB tattoos-2 packs

Bill Scott and Laurinda Ramonda attended the National Plant Board Meeting held in Oklahoma City, Oklahoma from August 9-13, 2009.

#### Agenda:

#### August 9, 2009:

NPB Board of Directors Meeting

Reception

#### August 10, 2009:

NAPPO meeting

**PPQ** Employee Meeting

**DHS CBP Meeting** 

National Plant Board Meeting (NPB member only)

NPB Regional Board Meetings (Eastern, Southern, Central, Western)

National Plant Board Committee Reports

Welcome/Opening Remarks

Roll Call

State Welcome-Secretary of Agriculture Terry Peach

State of the National Plant Board

Remarks by PPQ Deputy Administrator

US Forest Service/Special Topic

News from National Plant Diagnostic Network

PHIS Requirements: Data Granularity/Resolution Issues

Panel Discussion: Biological Control-What is the Future?

National Plant Board 101

#### August 11, 2009:

Irradiation as a Plant Quarantine Treatment: Status & Issues

National Certification and Accreditation Program

The "New" Media Panel Discussion

Stakeholder Issues & New Technologies

NAPPO-Status of Seed Panel-NPB Panel Opportunities

Remarks by BRS Deputy Administrator

Japanese Beetle Harmonization (Disharmony?) Plan Panel

**CBP-Special Topic** 

National P. ramorum Program Panel

**NPB** Committee Meetings

Banquet and Awards Ceremony

#### August 12, 2009:

National Plant Board Member Only Business Meeting

**PPO** Executive Team Meeting

ANLA Update

National Clean Plant Network

Postentry Ouarantine

Thousand Canker Disease

Field Trip to Oklahoma City Memorial and National Cowboy & Western Heritage Center Museum and Gallery Tour

Music Entertainment and Social Hour

#### August 13, 2009:

Phytosanitary Certification Fees-Implementation

impPIPE update

National Association of State Foresters
News from NAPIS
Barberry Black Stem Rust
Panel Discussion-Firewood USDA/States...next steps
PPQ Budget Update
Special Topic: Farm Bill 10210 & 10202 Implementation

**Workplans for 2010** were submitted to USDA/PPQ/APHIS by the deadline of August 14. They are: Infrastructure (on fiscal year July 1, 2010-June 30, 2011), Cereal Crop Nematode (3<sup>rd</sup> and final year), Karnal Bunt, Spotted Knapweed Bio control and Canada Thistle Bio control. Also submitted in September was the workplan for Emerald Ash Borer and Red Imported Fire Ant survey.

Laurinda Ramonda attended **B.E.S.T.** (basic supervisory training) for 2 weeks. This was held and taught through the Kansas Department of Transportation. One week was held in July and one week was held in August.

#### B.E.S.T. Itinerary for July:

NPB Board of Directors Meeting

Public Involvement, Media Relations, Interviewing Prep and Techniques, Progressive Discipline, Problem Solving, Compensation, Position Descriptions, Sexual Harassment and EEO, Legal Issues, Preparing Evaluations, Climate Survey and Personal and Professional

#### B.E.S.T. Itinerary for August:

LMS Review, Partnering and Mediation, Behavior and Social Styles, Stress Management, Diversity Awareness, Professional and Ethics, Generations, Coaching to Improve Performance, Words of Wisdom, FMLA/Drug and Alcohol Program, Adapting to the Speed of Change, Meeting with HR Bureau Chief, Team Productivity Tools and Organizational Commitment

#### State CAPS Committee Meeting Minutes - October 8, 2009

The state CAPS Committee met on October 8, 2009 at 1:30 am at the Dean's Conference room, 137 Waters Hall at Kansas State University. In attendance were Erin Stiers-USDA-APHIS, Wendy Beltz-USDA-APHIS, Craig Webb-USDA-APHIS, Doug Jardine-KSU Plant Pathology, Jon Appel-KDA, Glenn Salsbury-KDA, Sharon Dobesh-KSU Entomology, Katie Howard-KDA, Jeff Vogel-KDA, Bill Scott-KDA, Erick DeWolf-KSU Plant Pathology, Tim Todd-KSU Nematologist, Larry Biles-KFS and Laurinda Ramonda-CAPS Coordinator.

Introductions were made after discussing CAPS surveys.

We have switched from a fiscal year to a calendar year for surveys.

For fiscal year July 1, 2008-June 30, 2009 (surveys have been completed and data entered into NAPIS):

- Infrastructure (staying on fiscal year).
- Karnal Bunt

• 2<sup>nd</sup> year Cereal Crop Nematode Survey with 729 samples in 25 Counties. Counties: Barber, Barton, Clark, Comanche, Edwards, Ellis, Ellsworth, Ford, Harper, Hodgeman, Kingman, Kiowa, Lincoln, Osborne, Pawnee, Phillips, Pratt, Reno, Rice, Rooks, Rush, Russell, Smith, Stafford, and Trego.

## For calendar year January 1-December 31, 2009: (surveys completed, results pending for Small Grain)

- Red Imported Fire Ants surveyed for in the City of El Dorado in Butler County. This surveyed was done in 305 sites in July, August and September.
- Small Grain & Soybean Commodity survey began in June and with traps removed in September.

#### Targets and trapping:

- Silver Y Moth (Autographa gamma), June-September in wheat & soybean fields. Delta trap with pheromone (Z)-7-dodecenyl acetate and (Z)-7-dodecenol lure. Checked traps monthly.
- Egyptian Cotton Leafworm (Spodoptera littoralis), June-September in wheat & soybean fields. Delta trap with synthetic pheromone (Z,E)-(9,11)-tetradecadienyl acetate with a 2 mg pheromone blend lure. Checked traps monthly.
- Old Bollworm (Helicoverpa armigera), June-September in wheat & soybean fields. Shared delta trap with Egyptian Cotton Leafworm with (Z)-11-hexadecenal and (Z)-9-hexadecenal lure. Checked traps monthly.
- Maritime Gardensnail (Cernuella virgata), June-September in wheat & soybean fields. Visually inspected for on plants at edge of field when traps were checked monthly.
- Yellow Witchweed (Alectra vogelii), June-September in soybean fields. Visually inspected for when traps were checked monthly.
- Soybean Aphid (Aphis glycines), June-September in soybean fields. Visually inspected for when traps were checked monthly.
- Cereal Leaf Beetle (Oulema melanopus), June-June in wheat fields. Visually inspected for when traps were checked monthly.
- Insidious Flower Bug & Minute Pirate Bug (Orius spp.), Damsel Bug (Nabis spp.), Lacewings, and Lady Beetles, June-September in wheat and soybean fields. Sweep nets were done in fields when traps were checked

Both wheat and soybean fields were checked. One hundred fifty-nine fields were checked with 27 of them being soybeans and 132 being wheat.

• Canada Thistle Biological Control using Ceutorhynchus litura at Keith Sebelius Lake.

- Spotted Knapweed Biological Control using the lesser knapweed flower weevil (Larinus minutes) and the knapweed root weevil (Cyphocleonus achates).
- Emerald Ash Borer- 100 traps KDA, 100 traps USDA in June-September.

#### For fiscal year July 1, 2009-June 30, 2010: (in progress)

Infrastructure

#### For calendar year January 1-December 31, 2010: (submitted to USDA)

- 3rd year Cereal Crop Nematode survey
- Karnal Bunt
- Canada Thistle Bio Control
- Spotted Knapweed Bio Control
- Emerald Ash Borer
- Fire Ant (several different counties will be surveyed)

#### State Specialist Updates:

Jeff Vogel-State Weed Specialist: Spotted knapweed bio control project had 2 organisms released, 1000 root weevils received from Montana and 500 flower weevil received from Colorado in Nemaha county. Good conditions occurred for the releases. Fifteen counties were surveyed for spotted knapweed (Atchison, Bourbon, Brown, Cherokee, Crawford, Doniphan, Johnson, Leavenworth, Linn, Marshall, Miami, Nemaha, Republic, Washington and Wyandotte) and Nemaha was the only county it was found in. There are scattered plants 1-2 miles from release site.

Supplemental releases are planned for next year with more surveys in counties from Jewell along the Nebraska border to Colorado. There will be 300-400 points surveyed.

Canada thistle bio control survey was done at Keith Sebelius lake in Norton county. The Canada thistle is located under a cottonwood canopy so it is hard to get to and the area does not want aerial spraying so this was a good location to use bio control. The release occurred in August and funding for supplemental releases have been submitted for next year.

Hydrilla was found in a pond in an Olathe park last year. The city is cooperating with KDA and we have used some emergency pest fund money to buy granular Fluorodone. The first spraying occurred at the beginning of June. Survey has been conducted downstream and nothing has been found. The hydrilla has probably been in the pond for 2-4 years. If only the herbicide is used it will take from 5-8 years to eradicate it.

<u>Glenn Salsbury-state Entomologist:</u> Trees brought to Kansas from a quarantine area in Tennessee were planted in El Dorado. These trees were planted around the city and water treatment plant. We baited 300+ traps with SPAM and trapped once a month for 3 months. The trapping occurred in July, August and September. No fire ants were found.

In August an individual said he had been stung by ants in Coffeyville and I investigated the occurrence. Plants had arrived in a greenhouse in May from Florida. Red Imported Fire Ants were found after putting out baits with SPAM in a 3'x100' area. Ants were found again in October after disturbing the nest. The colony has moved inside the greenhouse and it has been treated with Talstar.

This is the 6<sup>th</sup> time Kansas has intercepted Red Imported Fire Ants.

A new record for Kansas occurred when Pavement Ants have been found. They do sting.

A fire ant survey has been submitted to survey greenhouses in several counties for next year. Two hundred sixty-nine nurseries have products coming from fire ant states.

Jon Appel-State Pathology Specialist: There were 729 soil and root samples taken in 25 counties in central Kansas for the Cereal Crop Nematode survey. Four temporary staff were used, 2 were full-time and 2 were part-time. Weather issues were a problem this year. A dry winter made soil hard and then a blizzard occurred and lowered soil temperatures which slowed root growth. Then rain storms water logged the soil. No exotic nematodes were found.

## Cereal Crop Nematode Survey 2009 Summary Report

**CAPS Committee Meeting** 

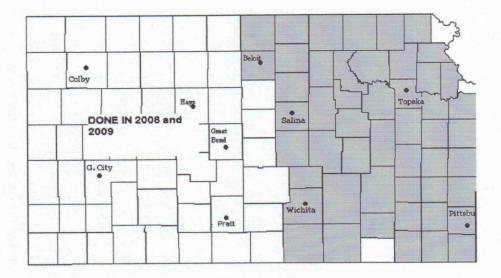
October 8, 2009

We completed the second year of a three-year survey of the state's wheat production acreage. The survey was composed of 729 samples taken in 25 central Kansas counties at a rate of one sample per 4800 production acres. Each sample was composed of soil and root subsamples from about 1 acre. Tim Todd's nematology laboratory at Kansas State University analyzed the soil and root nematode populations from the individual samples.

The 2009 survey used four temporary employees to collect samples. Two of these employees worked full time for about 6 weeks and the two other employees worked part time from regular jobs. Weather was a limiting factor this year in the ability to collect samples. A blizzard that dumped over 28 inches of snow in early April hampered collections in some of the scheduled southern counties. This weather dropped soil temperatures and waterlogged soils delaying the survey. Frequent rains in late April and early May followed the blizzard in the same area producing some flooding. In the northern area of the state, we had the extreme opposite problem with very dry soils that delayed us from sampling. These weather factors collectively forced us into sampling in a much smaller period than we wanted and at times, we overwhelmed the laboratory's ability to process samples.

The survey did not find any of the target exotic nematodes of the Heterodera (cysts) and Meloidogyne (root knot) genera in the samples and believe that this area like western Kansas is free of these pests.

Below is a map of counties that will be sampled in spring of 2010.



#### Nematode Prevalence in KS Wheat Samples: CAPS Program, 2008\*

Prevalence (%)	Avg. density (max) #/100 cm <sup>3</sup> soil
82	62 (1,440)
73	28 (480)
31	126 (3,380)
0	10 1
0	-
	(%) 82 73

#### Nematode Prevalence in KS Wheat Samples: CAPS Program, 2009\*

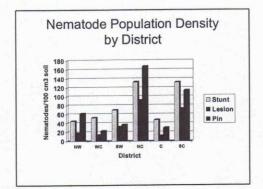
Nematode	Prevalence (%)	Avg. density (max) #/100 cm <sup>3</sup> soil
Merlinius brevidens Quinisulcius acutus	89	120 (1,880)
Pratylenchus neglectus P. thornei	62	88 (1,080)
Paratylenchus projectus	33	276 (6,520)
Heterodera latipons H. avenae	0	-
Meloidogyne artiellia	0	-

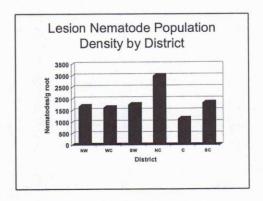
#### Nematode Prevalence in KS Wheat Samples: CAPS Program, 2009\*

Nematode	Prevalence (%)	Avg. density (max) #/100 cm <sup>3</sup> soil
Xiphinema	5	10 (60)
Helicotylenchus	2	115 (1,220)
Hemicycliophora	2	228 (760)
Paratrichodorus	2	11 (40)
Criconemella	1	17 (40)

#### Pratylenchus Prevalence in KS Wheat Root Samples: CAPS Program, 2009\*

Nematode	Prevalence (%)	Avg. density (max) #/100 cm <sup>3</sup> soil
Pratylenchus neglectus	74	2,274 (90,309)
P. thornei	1	1,701 (4,023)
Total	76	2,263 (90,309)





<u>Tim Todd, KSU Nematologist, spoke about the Cereal Crop Nematode survey</u>: This is the 1<sup>st</sup> time a nematode survey of wheat production has occurred in Kansas. Nematode populations were similar to last year. The environmental conditions were not favorable but densities were higher. Pratylenchus thornei has a higher damage potential (1%) compared to Pratylenchus neglectus. The central counties had lower densities possibly because of soil type. Yield losses of 1% per 1000 nematodes per gram of dry root weight occur due to this pest. Nematodes ranks in the top third for crop loss.

<u>USDA-APHIS-PPQ:</u> Erin Stiers said that 3 Gypsy moths were found last year and none were found there this year. One Gypsy moth was found this year in a parking lot of Wal-Mart in Overland Park.

No Emerald Ash Borer was found.

Japanese Beetle was found outside of Forbes Field in Topeka. An exclusion survey was done at the airport and none was found so no action was taken at the airport.

The budget may be approved in November.

Craig Webb said his lab has been in place for 5 years and has been mostly used for diagnostic support for emergency programs using real time PCR.

The Karnal Bunt survey was talked about. Cooperation from the elevators has been diminishing every year. We did get a few more elevators sampled this year over last year after letters and calls to the ones which refused us last year. The national program is working on possible solutions to this issue because other states are having the same problems.

#### KSU Specialists Updates:

<u>Doug Jardine:</u> Soybean rust has been found 75 miles from Kansas in Arkansas. Increased survey has occurred along the Kansas border. Kansas soybeans are beyond an economic loss. There will be no funding for sentinel plots for 2010 for Tier 2 and 3. Mobile scouting may be done. (Tier 1-gulf coast, Oklahoma and Arkansas-endemic for Soybean rust, Tier 2-states where Soybean rust has been reported but arrives late which includes Kansas, Tier 3-states where Soybean rust has never been reported).

This is the 20<sup>th</sup> year for Gray Leaf Spot of corn. It is becoming more prevalent because of increase of no till and replanting corn after corn. Spraying is recommended for more severe outbreaks.

Sudden Death Syndrome of soybeans is worse than it has been this year. There seems to be a correlation with soybean cyst nematode.

<u>Erick DeWolf:</u> He informed of us of an informal wheat virus survey being done.

Also UG99 black stem rust of wheat has been slowed. North America is preparing for cereal rust surveys by tracking counties with rust.

<u>Sharon Dobesh:</u> Wheat survey data sharing protocols will be sent to State Plant Health Directors and State Plant Regulatory Officials from the NPDN.

<u>Larry Biles:</u> Point of contacts for Bark Beetle will be Bob Atchison and for Emerald Ash Borer will be Tim McDonnell.

<u>Possible surveys for 2011:</u> Corn commodity, Barberry, Grape. If there are any other suggestions bring them to the next meeting.

We will be having another meeting in a couple of months to discuss new surveys so look over the list of exotics and come with ideas. Thanks to all who attended and the information shared.

The annual **Horticulture Inspection Society (H.I.S.) Central Chapter meeting** was held in Ankeny, Iowa on October 19-22. Bob Buhler, Terry Clarkson, Kitty Rhynerson and Laurinda Ramonda attended. It was a great meeting.

#### **Itinerary**:

#### October 22-

Registration
Iowa H.I.S. welcome
Robin Pruisner (SPRO) welcome
I-R4 project-Cristi Palmer

A look at Farmers Markets-Mike Bevins-State Horticulturist EAB updates-James Buck-USDA-APHIS-PPQ

Domestic Programs update and H.L.S. alliance Billy Newton

Domestic Programs update and H.I.S. alliance-Billy Newton

Medical Examiners tour

After dinner slides

#### October 23-

National Seed Health-Lisa Shephard-Iowa State
Oak Tatters Research-Mark Vitosh-Department of Natural Resources
Leeds Microscopes overview of Microscopes-Scott Carpenter
Hands on microscope work
Emerging Perennial Diseases and New Research-Erika Saalau
H.I.S Jeopardy after dinner.

#### October 24-

**Business** meeting

Laurinda attended a great **informational meeting** put on by the **Great Plains Tree & Forest Initiative** with Tim McDonnell from the Kansas Forest Service in Minneapolis, Minnesota on October 27 and October 28, 2009. We met with local agencies, communities, green industry and other professionals on how best to prepare, manage and work with EAB when it arrives.

#### October 27-

Morning-Agencies and University efforts
Mark Abrahamson-Minnesota Department of Agriculture
Val Cervenka-Minnesota Department of Natural Resources
Steve Katovich-United States Forest Service
Jeff Hahn-University of Minnesota (UMN) Entomology
Gary Johnson-UMN Forest Resources

Afternoon-Community forestry/administration and Green Industry Ralph Sievert & Jim Hermann-City of Minneapolis Cy Kosel-City of St. Paul Greg Krogstad-Rainbow Tree Care John Daniels-Bachmans Wholesale Nursery

#### October 28-

Community forestry/administration continued

Lonnie Brokke & Anita Twaroski-City of Roseville Paul Edwardson-City of Bloomington Wrap-up discussion with group.

Jon Appel, Glenn Salsbury and Laurinda Ramonda attended the **Thousand Cankers Black Walnut National Conference** on November 3-4, 2009 at St. Louis, Missouri. Approximately 150 people attended this conference. Attendees ranged from different state agencies, federal agencies, national organizations and stakeholder groups. There was a lot of information and concerns shared. The next step will be to get a consistent plan with other neighboring states.

#### **Itinerary**:

#### November 3-

- Welcome from Dr. Jon Hagler-Director Missouri Department of Missouri
- Walnut in the West: Death by a Thousand Cankers Ned Tisserat-Colorado State University
- Issues Surrounding Management of Thousand Cankers Disease Whitney Cranshaw-Colorado State University
- The City of Boulder Story: Thousand Cankers Disease Management from a Municipal Perspective Kathleen Alexander-City of Boulder, CO
- The Challenge: Failure is Unacceptable-Stop 1000 Cankers Disease in Black Walnut [*Juglans nigra*] from Spreading Larry Frye-National Walnut Council
- Black Walnut Germplasm Preservation & Nut Economics Mark Coggeshall-UMC, Department of Forestry Research Analyst/Tree Improvement Specialist
- Thousand Cankers Pathways Analysis and Regulatory considerations-Scott Pfister USDA APHIS PPQ

#### November 4-

- Occurrence of Walnut on Forest Land in the United States-Jerry Van Sambeek and Stephen Shifley-US Forest Service
- The Importance of Nuts From Back Walnut Trees to Industry as Well as To Consumers, Harvesters, and Many Towns in Rural America Brian Hammons-Hammons Products
- Black Walnut Decline in Oregon Jay Pscheidt-Oregon State University
- Advances In Understanding Ambrosia Beetle Chemical Ecology and Utilizing the Findings to Improve Insecticide Management Studies-Jason Oliver-Tennessee State University and Chris Ranger-USDA-ARS
- A Walnut Grower's Worst Nightmare and Some Perspectives Harlan Palm-President Missouri Walnut Council
- Thousand Cankers Disease of Black Walnut Where do we go from here on Science, Regulation, Education and Monitoring? Panel Discussion – Moderated by Manfred Mielke-US Forest Service

On November 9-10, 2009, Laurinda took the ICS 400 class in St. Joe, Missouri. Kansas Department of Homeland Security sent me to this class. It is a continuation from ICS 300.

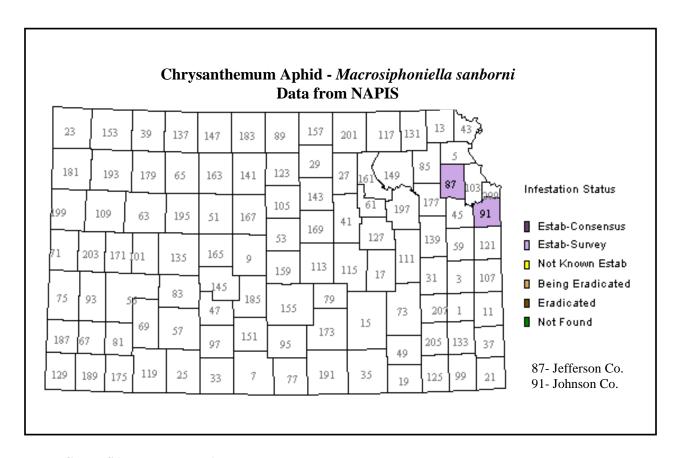
#### November 15-20, 2009-

Laurinda was sent with a team which consisted of veterinarians and Kansas Department of Agriculture staff to be certified as an Incident Management Team, ICS 420. My role was Planning Section Chief. This was the most stressful and intense training I have ever done. All of

our hard work paid off though because we are passed as a team and as individuals. The multistate partnership paid for this through our Kansas Department of Homeland Security.

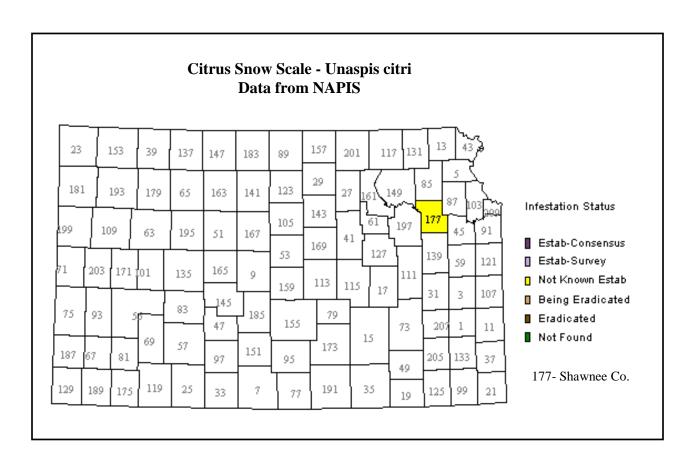
#### Listed below are records that have been submitted to NAPIS

\*Data for cooperative agreements surveys are in the survey report.



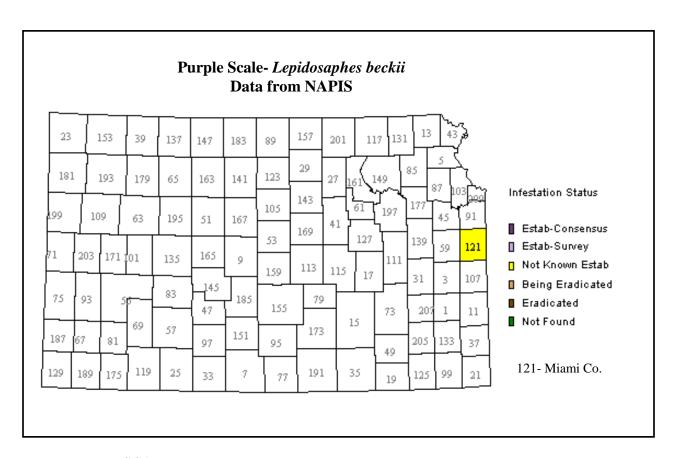
#### **Pest: CHRYSANTHEMUM APHID**

	Positive	Negative
7/12/09		
Jefferson County	1	0
Johnson County	1	0
State Total	2	0



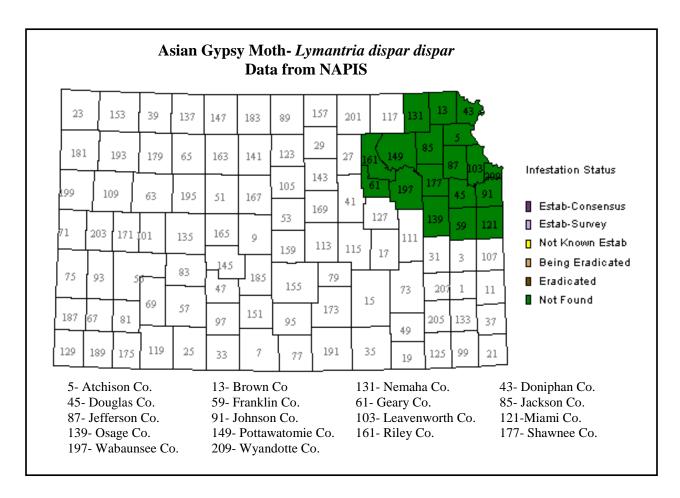
#### **Pest: CITRUS SNOW SCALE**

	Positive	Negative
Hibiscus, 7/24/09, Shawnee County	1	0
State Total	1	0



#### **Pest: PURPLE SCALE**

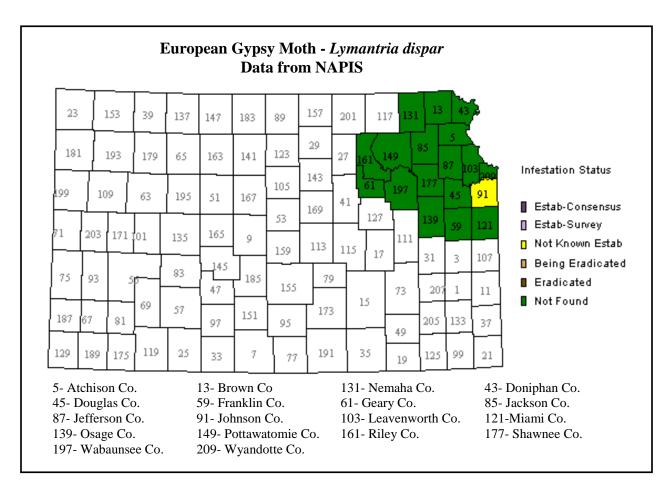
	Positive	Negative
Burning Bush, Euonymus atropurpurea		
7/27/2009, Miami County	1	0
State Total	1	0



### Pest: GYPSY MOTH (Asian) \*Data Source: USDA-APHIS

	Positive	Negative
Atchison County	0	15
Brown County	0	23
Doniphan County	0	16
Douglas County	0	128
Franklin County	0	22
Geary County	0	21
Jackson County	0	24
Jefferson County	0	82
Johnson County	0	80
Leavenworth County	0	75
Miami County	0	29
Nemaha County	0	21
Osage County	0	33
Pottawatomie County	0	14
Riley County	0	24
Shawnee County	0	34
Wabaunsee County	0	8
Wyandotte County	0	45
State Total	0	694

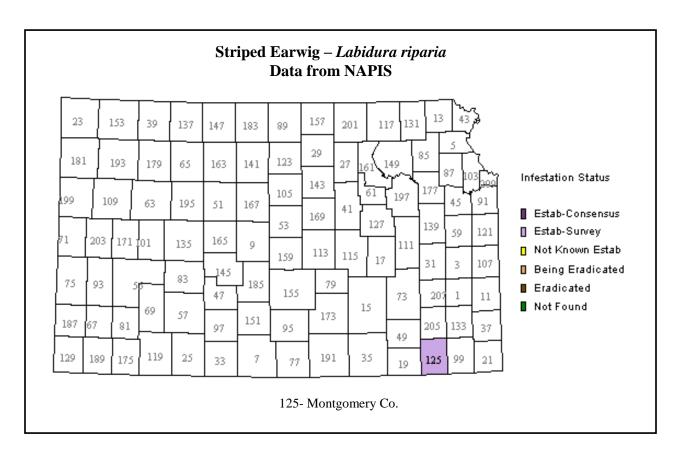
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#### **Pest: GYPSY MOTH (European)**

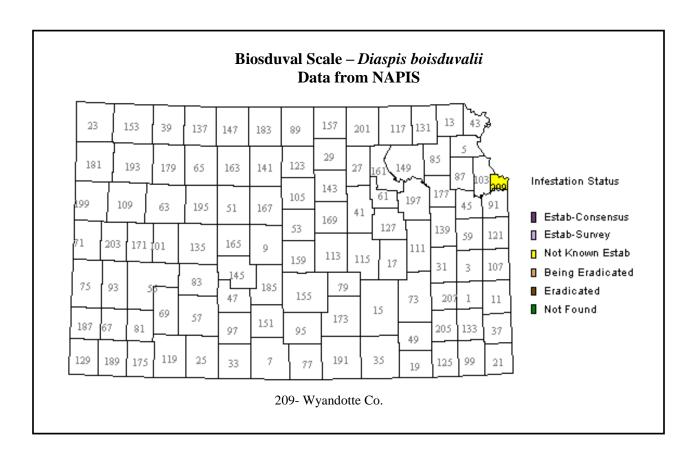
\*Data Source: USDA-APHIS

"Data Source: USDA-APRIS		
	Positive Neg	ative
Atchison County	0	15
Brown County	0	23
Doniphan County	0	16
Douglas County	0 1:	28
Franklin County	0	22
Geary County	0	21
Jackson County	0	24
Jefferson County	0	82
Johnson County	1	79
Leavenworth County	0	75
Miami County	0	29
Nemaha County	0	21
Osage County	0	33
Pottawatomie County	0	14
Riley County	0	24
Shawnee County	0	34
Wabaunsee County	0	8
Wyandotte County	0	45
State Total	1 6	93



#### **Pest: STRIPED EARWIG**

	Positive	Negative
Montgomery County, 10/14/2009	1	0
State Total	1	0



#### **Pest: BOISDUVAL SCALE**

	Positive	Negative
Wyandotte County 10/28/2009	1	0
State Total	1	0